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establishment in New York, with five cents in stamps on the envelope!) I am aware that in several of my own published papers the objectionable abbreviations occur, but these (and many other queer things) are due to editorial interference.

T. D. A. COCKERELL.

'TABLETTES ZOOLOGIQUES.'

TO THE EDITOR OF SCIENCE: Will you kindly give me space to inquire if any reader of SCIENCE knows of the existence in the United States of a copy of the 'Tablettes Zoologiques'? This journal was published at Poitiers, France, by Aimé Schneider. The first volume appeared in 1885, and the third, which I think was the last, in 1892. I have as yet been unable to locate a copy in America, and any information will be very gratefully received.

HOWARD CRAWLEY.

WYNCOTE, PA.,

June 12, 1903.

SHORTER ARTICLES.

UNUSUAL ABUNDANCE OF A MYRIAPOD, *PARAJULUS PENNSYLVANICUS* (BRANDT).*

DURING the latter part of August and the first of September, 1902, the walks and drives along the university campus were overrun with a myriapod which proved to be *Parajulus pennsylvanicus* (Brandt). Bright, sunny days, which were likewise cool, were observed to bring a greater number of the species into evidence. Complaints were made by residents along the adjacent avenues of the numbers of these 'worms,' as they were called, which covered the sidewalks and terraces and even entered the residences. Often in passing along the paths running in the campus it was found to be difficult, if not impossible, to avoid crushing numbers at every step. They exhibited no general direction to their movements, and hence a migration from one portion of this locality to another definite locality seems not to be the case. Rather it seems that they were trying to find higher or perhaps dryer ground. When one was taken up

in the fingers and then allowed to move in a direction opposite to its original direction, it showed no sign of any attempt at orientation.

A case similar to this one is found every year on Cedar Point, Sandusky, O., where *Fontaria indiani* Bollman, immediately prior to and during ovipositing, is found in great numbers along the lowlands on the Bay side. But in the case of the one mentioned above as occurring on the campus, of all the females examined, none contained eggs. Hence this is not a true parallelism.

Several cases of extensive migrations of myriapods are on record. In the *Zoologischer Anzeiger* for 1900, Verhoeff records a migration of such extent that railroad trains were stopped, owing to the numbers that were crushed under the wheels and thus caused them to slip. The species in this case was *Julus terrestris*. Verhoeff also calls attention to a description of an extensive migration of a species of *Brachyjulus*, given in the same journal by an Austrian named Paslavisky, who states that in 1879, in Austria, this species was excessively numerous in a certain district. Verhoeff regards the cause of such movements as due to over-population, and hence an attempt to obviate the results of the law of Malthus. That this is not the cause in all cases is attested by that of the species of *Fontaria* that I mentioned as occurring on Cedar Point, which is undoubtedly a purely sexual matter. A third record of such movements is given in Bollman's 'Myriapoda of North America,' in which, on page 75, he mentions the occurrence of *Fontaria virginicensis* (Drury) in Donaldson, Arkansas, in such numbers as to attract general attention. The adults were found to bear a ratio to the number of young that were observed with them of about one to three hundred. Apparently, this movement is due to a third reason—the migration of the adults with the young. Miss Mauck (*American Naturalist*, XXXV., 447) gives an account of a migration of *Fontaria virginicensis* (Drury) but no cause is assigned to the movement.

To conclude, every one of the cases of extensive migrations in myriapoda that have

* Read at Columbus meeting, Ohio Academy of Science, November, 1902.

been recorded seems to have a cause peculiar to itself. This may be either connected with mating or it may have nothing to do with it, as seems to be the case with the form described as occurring about the university campus. As a possible explanation of the movement in the present case, it may be offered that it is a preparation for winter. The adults live over the winter under logs, leaves, etc. Their eggs are laid in low, damp areas. Such localities are unfit for hibernation, and hence the migration to more dry and protected localities.

MAX MORSE.

DEPARTMENT OF ZOOLOGY,
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RECENT ZOOPALEONTOLOGY.

STEGOCERAS AND STEREOCEPHALUS.

This review of the above-named genera of dinosaurs, by the able paleontologist Franz Baron Nopcsa (*Centralblatt für Mineralogie*, etc., 1903, No. 8), is a highly important one and is, at the same time, suggestive of our limited knowledge of the Dinosauria generally and of the great results to be looked for from the study of this group of reptiles in the future. These animals were recently described by the writer from the Belly River formation of the Red Deer River region. One has a solid horn in the front part of the skull, the other a solidly plated head.

Nopcsa's interpretation of the *Stegoceras* skull elements is noteworthy and accentuates the necessity of having more material for study before definite or final determinations can be made. He comes to the conclusion that the *Stegoceras* specimens that were supposed to be from 'the median line of the head in advance of the nasals'* are to be interpreted rather as representing the frontal and nasal elements of the skull.

In support of this decision attention is called to the frontal of *Camptosaurus prestwichi*, as figured by Hulke in the *Quarterly Journal of the Geological Society* for 1880. In this figure the strong, general structural resemblance to the *Stegoceras*

* Geological Survey of Canada. Contributions to Canadian Palæontology, Vol. III. (quarto), pt. II., p. 69, pl. xxi, figs. 1-5.

specimens, particularly noticeable on the under surface, is pointed out with emphasis. Reference is also made to a similarly shaped, but as yet undescribed, frontal of *Mochlodon*.

According to the above interpretation, *Stegoceras* brings to our notice an entirely new type—a unicorn dinosaur, of especial interest in that heretofore a form having an unpaired horn springing from the fronto-nasal region was unknown.

It is still considered problematical whether *Stegoceras* should be assigned to the Ceratopsidae or to the Stegosauridae.

Stereocephalus, the second genus, is referred by Nopcsa to the Acanthopholididae, and is regarded as a new and important type capable of throwing additional light on the modification of the skull of the Ceratopsidae.

It is hoped that further contributions to our knowledge of the Cretaceous dinosaurs may be forthcoming from the pen of this sympathetic writer and gifted observer.

OTTAWA,
May 26, 1903.

LAWRENCE M. LAMBE.

SCIENTIFIC NOTES AND NEWS.

THE remaining separata of the late Professor Edward D. Cope have been arranged in sets and are ready for free distribution to students and institutions willing to pay express charges on them. Application should be made to Mrs. E. D. Cope, Haverford, Pa.

WESLEYAN UNIVERSITY has conferred its LL.D. on William D. Brewer, professor emeritus in the Sheffield Scientific School of Yale University.

THE ex-resident physicians and associate physicians of Johns Hopkins Hospital gave a dinner on May 15, at the Maryland Club, Baltimore, in honor of Dr. William Osler, at which he was presented with a copy of the 'Dictionary of National Biography.'

THE Zoological Society of London has confirmed the action of the council in granting a pension of £700 to Dr. P. L. Selater, F.R.S., in consideration of his services to the society for forty-three years.

PRESIDENT W. G. TIGHT, of the University of New Mexico, is with the Annie S. Peck